

**ABSTRACT**

A discharge lamp ballast is designed to limit or interrupt its AC output power to the discharge lamp upon occurrence of an abnormal discharge outside of an arc tube. A detector is included to examine a lamp voltage once in each of the positive and negative half-cycles or in each one complete cycle of the AC output power, and identifies the abnormal discharge when there is a particular change in the monitored lamp voltage. The particular change may be defined by a single logic or by combination of several logics each designed to represent specific characteristic for the abnormal discharges of several types.